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PATENT APPLICATION

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IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Quintin T. Phillips, et al.

Confirmation No.: 2177

Application No.: 09/924,200

Examiner: R. Beatty

Filing Date: 08/07/2001

Group Art Unit: 2851

Title: CASSETTE LOADING OF PRINTING MATERIALS

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TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in **triplicate** is the Appeal Brief in this application with respect to the Notice of Appeal filed on 2/20/2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( ) one month	\$110.00
( ) two months	\$420.00
( ) three months	\$950.00
( ) four months	\$1480.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$330.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

Quintin T. Phillips, et al.

By Todd A. Rathe

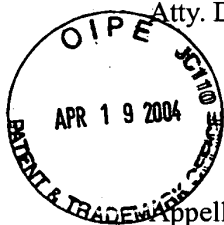
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant: Quintin T. Phillips et al.  
Filing Date: 08/07/2001  
For: CASSETTE LOADING OF PRINTING CONSUMABLES  
Group Art Unit: 2852  
Docket No.: 10002608-1  
Application No.: 09/924,200  
Examiner: R. Beatty

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**BRIEF ON APPEAL**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REAL PARTY IN INTEREST**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249, Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware corporation, headquartered in Palo Alto, California. The general or managing partner of HPDC is HPQ Holdings, LLC.

**RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

**STATUS OF THE CLAIMS**

This is an appeal from the Final Office Action mailed on October 21, 2003, finally rejecting Claims 1-6, 8, 9 and 11-20. No claims have been allowed.

**STATUS OF THE AMENDMENTS**

An amendment after final was filed on December 3, 2003 amending Claims 1 and 14-19. The proposed amendments have been entered for purposes of appeal as indicated in the Advisory Action mailed on January 23, 2004.

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### **SUMMARY OF THE INVENTION**

The present invention relates generally to a loading system for loading printing consumables in imaging systems. (Specification, p. 1, lines 3-5). Loading consumables typically requires opening an access door that exposes the internal mechanisms of the imaging system. (Specification, p. 1, lines 19-21). The profusion of rollers, plates and warning labels can be intimidating to non-technical users, creating the impression that a task as simple as changing a toner cartridge should be attempted only by a trained professional service provider. (Specification, p. 1, lines 21-24). This frequently results in workflow delays, as the queue of would-be productive workers at the printer grows while awaiting a designated operator to change a consumable, such as a toner cartridge. (Specification, p. 1, lines 24-26).

Claim 1, the representative claim for the first group, is directed to printing consumable loading assembly 32 (Fig. 3) including a guide assembly 36 having a series of cooperating spring-loaded levers and motor-driven cams (Specification, p. 5, lines 7-9). The guide assembly 36 is adapted to receive a consumable-containing cartridge 34 as it is inserted through cartridge openings 35, 44-50 in the imaging system housing. The guide assembly 36 is adapted to guide the consumable-containing cartridge to an in-use position within the cartridge holding assembly. (Specification, p. 5, lines 4-6).

Claim 11, the representative claim for the second group, depends from Claim 1 and additionally recites the feature of the cartridge holding assembly including a carousel adapted and constructed to hold a carousel 86 adapted and constructed to hold a plurality of consumable-containing cartridges 84 (Figure 6). Claim 11 further recites that the guide assembly is mounted within the system housing in a position aligned for loading cartridges 84 into the carousel. (Specification, p. 5, lines 32 - p. 6, line 1). Claim 11 recites that the carousel is configured to rotate to a first position 88 to receive cartridges loaded via the opening and the guide assembly 82 and a second position 90 for image forming. (Specification, p. 6, lines 1-3).

Claim 12, the representative claim for the third group, depends from Claim 1. Claim 12 further recites that the loading assembly includes a hinged door over the at least one opening in the system housing.

### **ISSUE**

1. Whether Claims 1-6, 8, 9 and 11-20 of Groups 1-3 may properly be rejected under 35 U.S.C. § 103(a) over Japanese Patent JP4184464 (Matsunaga) in view of U.S. Patent No. 5,757,578 (Shimoyama)?

### **GROUPING OF THE CLAIMS**

For purposes of this appeal only, grouping of the claims is as follows:

1. Claims 1-6, 8-9, 13-18 and 20 essentially stand or fall together and are therefore grouped together. Independent Claim 1 is a representative claim for the group because it is the broadest claim in the group.
2. Claims 11 and 19 essentially stand or fall together and are therefore grouped together. Claim 11 is the representative claim for the group because it is the broadest claim in the group. Claim 11 depends from Claim 1 and includes the additional feature of a carousel constructed to hold a plurality of consumable-containing cartridges, wherein the guide assembly is mounted within the housing in a position aligned for loading cartridges into the carousel and wherein the carousel rotates to a first position to receive cartridges loaded by the opening in the guide assembly and a second position for image forming.
3. Claim 12 essentially stands or falls by itself and is therefore grouped by itself. Claim 12 depends from Claim 1 and recites the additional feature of a hinged door over the cartridge opening in the system housing.

Thus, Applicant respectfully requests individual consideration of each of the three groups herein described. The separate patentability of Groups 1-3 is discussed below in the Argument.

### **ARGUMENT**

#### **REFERENCES RELIED UPON**

The following references were relied upon by the Examiner to reject the claims of Groups 1-3: Japanese Patent 4,184,464 (Matsunaga) and U.S. Patent No. 5,757,578 (Shimoyama).

#### **BRIEF DESCRIPTION OF REFERENCES**

Matsunaga discloses a system in which a cartridge 5 is manually loaded into an image-forming device (as indicated by the hands in Figure 7). Once the cartridge 5 is manually connected to carousel 11, the carousel is rotated to position cartridge in engagement

with conveying gears 22, 23 (shown in Figure 2). Conveying gears 22 and 23 move cartridge off of carousel 11 to a position where toner within cartridge 5 is withdrawn and is deposited upon a photoconductive drum 1.

Shimoyama discloses a tape cassette loading apparatus which is designed to reliably prevent erroneous loading of a tape cassette into a tape recorder system such that the lid of the tape cassette is always open when the tape cassette is inserted to a lid opening position. (Col. 3, lines 5-9).

### **BACKGROUND**

All claim rejections at issue in this appeal are made under 35 U.S.C. § 103(a).<sup>1</sup> The legal standards under 35 U.S.C. § 103(a) are well settled.

Obviousness under 35 U.S.C. § 103(a) is a legal conclusion involving four factual inquiries:

- (1) the scope and content of the prior art;
- (2) the differences between the claims and the prior art;
- (3) the level of ordinary skill in the pertinent art; and
- (4) secondary considerations, if any, of nonobviousness.

Litton Systems, Inc. v. Honeywell, Inc., 87 F.3d 1559, 1567, 39 U.S.P.Q.2d 1321, 1325 (Fed. Cir. 1996). See also Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459 (1966).

In proceedings before the Patent and Trademark Office (PTO), the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. In re Piasecki, 745 F.2d 1468, 1471-72, 223 U.S.P.Q. 785, 787-88 (Fed. Cir. 1984). "The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fritch, 972 F.2d 1260, 1265 (Fed. Cir. 1992); In re Fine, 837 F.2d 1071, 1074 (Fed. Cir. 1988); In re Lalu, 747 F.2d

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<sup>1</sup> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made."

35 U.S.C. § 103(a).

703, 705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 297 n.24, 227 U.S.P.Q. 657, 667 n.24 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 782 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. ACS Hospital Systems, 732 F.2d at 1577, 221 U.S.P.Q. at 933. Under 35 U.S.C. § 103(a), “teachings of references can be combined only if there is some suggestion or incentive to do so.” In re Fritch, 972 F.2d at 1266.

Since virtually all inventions are combinations of old elements, examiners may often find every element of a claimed invention in the prior art. In re Rouffett, 149 F.3d 1350, 1357, 48 U.S.P.Q.2d 1453, 1456 (Fed. Cir. 1998). However, rejecting patents solely by finding prior art corollaries for each claimed element would permit an examiner to use the claimed invention as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Id. If simply identifying each claimed element in the prior art were enough to negate patentability, very few patents would ever issue. Id. The best defense against this subtle but powerful attraction of a hindsight-based obviousness analysis is a rigorous application of the requirement for a showing of the teaching or motivation to combine references. In re Dembiczak, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

“In order to rely on a reference as a basis for rejection of the applicant’s invention, the reference must either be in the field of the applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” In re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992); In re Deminski, 796 F.2d 436, 442, 230 U.S.P.Q. 313, 315 (Fed. Cir. 1986).

The combination of elements from non-analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant’s invention itself.

In re Oetiker, 977 F.2d at 1447. See also Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 678-79, 7 U.S.P.Q.2d 1315, 1318 (Fed. Cir. 1988); In re Geiger, 815 F.2d

686, 687, 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987); Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1147, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985).<sup>2</sup>

### REJECTIONS

1. The claims of Groups 1-3 are patentable under 35 U.S.C. § 103(a) over Matsunaga and Shimoyama because the combination of Matsunaga and Shimoyama is improper.

To reject the claims of Groups 1-3, the Examiner relied upon the combination of Matsunaga and Shimoyama. However, the combination of Matsunaga and Shimoyama is improper for several reasons. First, Shimoyama is not analogous art and is completely unrelated to the principles of the present invention as recited in Groups 1-3. Second, there is no suggestion to combine Matsunaga and Shimoyama absent Appellant's own disclosure.

Each of Claims 1-6, 8-9 and 11-20 recites a guide assembly adapted to receive a consumable-containing cartridge as it is inserted through a cartridge opening of an image system housing. Each of Claims 1-6, 8-9 and 11-20 further recites that the guide assembly includes a series of spring-loaded levers and cooperating motor-driven cams that guide or transport the consumable cartridge to an in-use position.

As acknowledged by the Examiner, Matsunaga does not teach a guide system comprising a series of cooperating spring-loaded levers and motor-driven cams. (Final Office Action, p. 2). As a result, the Examiner additionally relies upon Shimoyama to teach the use of a series of cooperating spring-loaded levers and motor-driven cams. However, the Examiner is not allowed to simply combine elements of different references without a motivation or suggestion to do so.

A. The Combination Of Matsunaga And Shimoyama Is Improper Because Shimoyama Is Not Analogous Art.

To rely on a reference under 35 U.S.C. § 103, it must be analogous art. MPEP 2141.01, In re Oetiker, 977, Fed. 2d, 1443, 1446 (Fed. Cir. 1992). In particular, "In order to rely on a reference for a basis for rejection of an Applicant's invention, the reference must be

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<sup>2</sup>Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. In re Clay, 966 F.2d 656, 658 (Fed. Cir. 1992); In re Deminski, 796 F.2d 436, 442, 230 U.S.P.Q. 313, 315 (Fed. Cir. 1986); In re Wood, 599 F.2d 1032, 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979).

in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the invention was concerned." Id.

In the present case, each of Claims 1-6, 8-9 and 11-20 relate to a printing consumable loading assembly for an imaging system or a method of loading a consumable containing cartridge in an imaging system. However, Shimoyama relates to a completely different field of endeavor, a tape cassette loading apparatus. Moreover, Appellant's invention is related to a completely different problem than that addressed by Shimoyama. Appellant's invention addresses the problems associated with the sometimes intimidating task of loading a consumable-containing cartridge into an imaging system. In contrast, Shimoyama addresses a completely unrelated problem, the erroneous loading of a tape cassette into a tape recorder system which prevents a lid of the tape cassette from opening and prevents recording data to or reading data from the tape. (Col. 2, lines 51-60). Absent Appellant's own disclosure, one of ordinary skill in the imaging system art would have no reason to look to tape recording systems such as Shimoyama.

B. The Combination Of Matsunaga And Shimoyama Is Improper Because There Is No Suggestion To Combine Matsunaga And Shimoyama Absent Appellant's Own Disclosure.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. MPEP 2143.01. Even assuming, *arguendo*, that the tape recording device of Shimoyama was analogous prior art, the Examiner still has not shown – and indeed, cannot show – that there would have been any motivation or suggestion to one of ordinary skill in the art to combine the teachings of Matsunaga and Shimoyama. In support of the obviousness rejection, the Examiner states in the Final Office Action:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cassette insertion and ejection mechanism disclosed in Shimoyama et al. to move the toner cartridge because the cassette can be erroneously loaded as taught in Shimoyama et al.

(Final Office Action, p. 3). However, the fact that a "cassette can be erroneously loaded as taught in Shimoyama et al." is of no relevance to the loading of a consumable-containing cartridge into an imaging system. Nothing in Matsunaga appears to suggest any difficulty in



loading toner cartridge 5 once door 30 is opened. Moreover, Shimoyama attempts to solve the problem of cassette tapes being tilted as they are loaded. Matsunaga provides no indications that the tilted loading of toner cartridges is an issue or problem that must be solved.

In apparent recognition of this deficiency in both Matsunaga and Shimoyama, the Examiner also attempts to rely upon Appellant's own specification by referring to page 5, lines 7-18. However, it is well-settled law that Examiners are not permitted to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat patentability. In re Rouffet, 149 F. 3d at 1357. Accordingly, the Examiner's attempt to rely upon page 5, line 7-18 of Appellant's own specification is improper.

In attempting to rely upon Appellant's own disclosure, the Examiner further distorts Appellant's own disclosure. In the Advisory Action mailed on January 23, 2004, the Examiner states:

Applicant expressly states that it is well known to use spring-loaded levers and motor-driven cams to guide a printing cartridge 3 to its in-use position. (p. 5, lines 16-18).

(Advisory Action, page 2). However, this is not what the specification says. Nowhere does Appellant's specification state that it is well known to use spring-loaded levers and motor-driven cams to guide a printing cartridge. Rather, Appellant's specification actually states:

The guide assembly 36 can be constructed in accordance with known cassette guiding systems, such as that shown in U.S. Patent No. 5,757,578 to Shimoyama et al., the specification and claims of which are incorporated by reference herein. The guide assembly 36 guides the consumable-containing cartridge into an in-use position within a printing consumable holding assembly 38, in the same way that a cassette guide places a tape cassette in a read-write position. As is known in the art, a series of spring-loaded levers and motor-driven cams cooperate to guide the cartridge 34 into its in-use position (shown in broken line), and to eject the cartridge 34 from the holding assembly 38.

(Appellant's specification, p. 5, lines 1-10).

In essence, Appellants have discovered a new use and application for the cassette-loading system taught by Shimoyama. Rather than painstakingly describe the

loading system described in Shimoyama, the Applicants have incorporated Shimoyama by reference. The Examiner improperly attempts to distort Appellant's own disclosure by asserting that Appellant has admitted that those skilled in the art already knew that the cassette-loading system taught by Shimoyama could be used with print cartridges. This distortion is not supported by a careful reading of the specification. Thus, the Examiner's attempt to find motivation for combining the teachings of Matsunaga and Shimoyama based on Appellant's own disclosure fails. Because Shimoyama is not analogous art and because the Examiner has failed to show any motivation or suggestion to one of ordinary skill in the art to combine the teachings of Matsunaga and Shimoyama, the claims of Groups 1-3 are patentable over Matsunaga and Shimoyama.

**2. The claims of Group 2 are patentable under 35 U.S.C. § 103(a) over Matsunaga and Shimoyama because the alleged combination of Matsunaga and Shimoyama does not teach or suggest a guide assembly aligned for loading cartridges into a carousel, wherein the carousel rotates to a first position to receive cartridges via the guide assembly and a second position for image forming.**

Dependent Claim 11 of Group 2 recites that the imaging system includes a carousel constructed to hold a plurality of consumable-containing cartridges, wherein the guide assembly is aligned for loading cartridges into the carousel. Claim 11 further recites that the carousel is constructed to rotate to a first position to receive cartridges loaded via the opening in the guide assembly and a second position for image forming.

To establish a *prima facie* case of obviousness, prior art references, when combined, must teach or suggest all the claim limitations. MPEP 2143.03. Even assuming, *arguendo*, that: (1) the tape cassette loading apparatus of Shimoyama is analogous art and (2) there was a motivation or suggestion to combine the teachings of the tape cassette loading apparatus of Shimoyama with the imaging device of Matsunaga, such an alleged combination would still fail to disclose a guide assembly aligned for loading cartridges into the carousel, wherein the carousel is constructed to rotate to a first position to receive cartridges via the guide assembly and a second position for image forming.

In contrast, Shimoyama discloses a tape cassette loading apparatus which moves a tape cassette to a position in which its lid is removed, enabling tape within the cassette replaced at a read-write position within a DAT recorder. Matsunaga discloses conveying gears 22 and 23 which convey cartridge 5 to an unloading position in which an opening of cartridge 5 is created for the discharge of toner from the cartridge. At most, any

modification of Matsunaga based upon the teachings of Shimoyama would result in conveying gears 22 and 23 being replaced with the tape cassette loading apparatus of Shimoyama. Such a hypothetical combination of Matsunaga and Shimoyama would still fail to result in a guide assembly for loading cartridges into the carousel, wherein the carousel rotates to a first position to receive cartridges loaded via the guide assembly and a second position for image forming. In contrast, carousel 11 of Matsunaga would have to be positioned in a single location for being both loaded with cartridges from the loading apparatus of Shimoyama and for image forming. A *prima facie* case of obviousness requires that the prior references, teach or suggest all of the claim limitations. Accordingly, Claims 11 and 19 of Group 2 are patentable over Matsunaga and Shimoyama because Matsunaga and Shimoyama do not teach or suggest a carousel that rotates to a first position to receive cartridges loaded via a guide assembly and a second position for image forming.

**3. The claim of Group 3 is patentable under 35 U.S.C. § 103(a) over Matsunaga and Shimoyama because the combination of Matsunaga and Shimoyama fails to disclose a guide assembly that receives a cartridge as it is inserted through an opening covered by a door.**

Claim 12 of Group 3 is patentable under 35 U.S.C. § 103(a) over Matsunaga and Shimoyama because the alleged combination of Matsunaga and Shimoyama does not teach or suggest a guide assembly including a series of cooperating spring-loaded levers and motor-driven cams that receives a consumable-containing cartridge as it is inserted through a cartridge opening over which a hinge door is positioned. Claim 12 depends from Claim 1 which recites a guide assembly including a series of cooperating spring-loaded levers and motor-driven cams is adapted to receive a consumable-containing cartridge as it is inserted through a cartridge opening of the image system housing. Claim 1 further recites that the guide assembly guides the consumable-containing cartridge to an in-use position. Claim 12 additionally recites a hinged door over the cartridge opening in the system housing.

To establish a *prima facie* case of obviousness, prior art references, when combined, must teach or suggest all the claim limitations. MPEP 2143.03. Even assuming, *arguendo*, that (1) the tape cassette loading apparatus of Shimoyama is analogous art and (2) there was a motivation or suggestion to combine the teachings of the tape cassette loading apparatus of Shimoyama with the imaging device of Matsunaga, such an alleged combination would still fail to disclose a guide assembly having a series of cooperating spring-loaded levers and motor-driven cams which is adapted to receive a consumable-containing cartridge

as it is inserted through a cartridge opening over which a hinged door is sometimes positioned. As acknowledged by the Examiner, Matsunaga does not teach a guide system comprising a series of spring-loaded levers and motor-driven cams. (Final Office Action, p. 2). As a result, the Examiner additionally attempts to rely upon Shimoyama to teach the use of a series of cooperating spring-loaded levers and motor-driven cams. In combining the references, the Examiner points to door 30 of Matsunaga. (Final Office Action, p. 2) and asserts that:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cassette insertion and ejection mechanism disclosed in Shimoyama et al. to move the toner cartridge because the cassette can be erroneously loaded as taught in Shimoyama et al.

(Final Office Action, p. 3). However, at most, the alleged hypothetical combination of Matsunaga and Shimoyama, would result in gears 22, 23 being replaced by the cassette loading apparatus of Shimoyama. The resulting combination would still fail to disclose a guide assembly which receives a consumable-containing cartridge as it is inserted through a cartridge opening over which is positioned a door. In particular, no teaching or suggestion exists of further modifying Matsunaga to include a door between its carousel 11 and a tape cassette loading apparatus as taught by Shimoyama that replaces gears 22 and 23 of Matsunaga.

In the Advisory Action dated January 23, 2004, the Examiner responded to similar arguments raised with respect to the ejection of a consumable-containing cartridge through an opening. With respect to Claim 3, the Examiner stated:

It is to be noted that the claims do not claim a door but an opening. Matsunaga teach an opening in the image-forming apparatus (which has no reference numeral) which is covered by a toner cartridge carousel (sic) which is bolted onto the image-forming apparatus of bolts 8. It is believed that applicant is confusing the image-forming apparatus opening with the opening (covered by door 30) of the toner carousel (sic). It has been made clear previously that the opening examiner is reading the claims on is the opening of the image forming apparatus not the toner cartridge carousel (sic).

(Advisory Action, p. 2). However, in Claim 12, Appellant does specifically claim a door over the opening. The opening of the image-forming apparatus of Matsunaga does not have a door.

Moreover, it would not be obvious to one of ordinary skill in the art to alternatively replace the entire carousel 11 and gears 22, 23 of Matsunaga with the tape cassette loading apparatus of Shimoyama such that the tape cassette loading apparatus would receive a consumable-containing cartridge as it is inserted through a cartridge opening over which is sometimes positioned a hinged door. An obviousness rejection based upon a modification of a reference that destroys the intended purpose of the invention disclosed in the reference is not proper. MPEP, 2123.01, In re Gordon, U.S.P.Q. 2d 1125, 1127 (Fed. Cir. 1984). To alternatively replace both gears 22, 23 and carousel 11 of Matsunaga with the tape cassette loading apparatus of Shimoyama would indeed destroy the intended purpose of the loading apparatus of Matsunaga specifically requiring carousel 11. Accordingly, Claim 12 of Group 3 is patentable over Matsunaga and Shimoyama.

#### CONCLUSION

In view of the foregoing, the Appellant submit that the claims are not properly rejected as being unpatentable under 35 U.S.C. § 103(a) under the cited references. Accordingly, it is respectfully requested that the board reverse the claim rejections and indicate that a Notice of Allowance respecting all pending claims be issued.

Dated this 19<sup>th</sup> day of April, 2004.

Respectfully submitted,

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**APPENDIX - THE CLAIMS ON APPEAL**

1           1.       (Previously Presented) In an imaging system including a system housing and  
2 a cartridge opening formed in the system housing, a printing consumable loading assembly  
3 comprising:

4                   a cartridge holding assembly including a guide assembly, the guide assembly  
5 including a series of cooperating spring-loaded levers and motor-driven cams for guiding the  
6 consumable-containing cartridge to a loaded position when the consumable-containing  
7 cartridge is inserted thereby moving the cartridge holding assembly, the cartridge holding  
8 assembly connected to the imaging system within the housing;

9                   the consumable-containing cartridge insertable into the guide assembly, the  
10 guide assembly adapted to receive the consumable-containing cartridge as it is inserted  
11 through the cartridge opening of the imaging system housing, the guide assembly adapted to  
12 guide the consumable-containing cartridge to ~~into~~ an in-use position within the cartridge  
13 holding assembly.

1           2.       (Original) A printing consumable loading assembly according to claim 1,  
2 further comprising a control actuator connected to the imaging system and to the guide  
3 assembly.

1           3.       (Original) A printing consumable loading assembly according to claim 2,  
2 wherein the control actuator comprises an ejection mechanism connected to the imaging  
3 system and to the guide assembly, the ejection mechanism being adapted and constructed to  
4 selectively eject a consumable-containing cartridge from the holding assembly.

1           4.       (Original) A printing consumable loading assembly according to claim 3,  
2 further comprising the following:

3                   a sensor adapted and constructed to sense the quantity of consumable within  
4 the consumable-containing cartridge; and

5                   a display located on the system housing, the display being connected to the  
6 sensor to display sensor readings.

1           5.       (Original) A printing consumable loading assembly according to claim 3,  
2 wherein the control actuator comprises the following:

3 a sensor adapted and constructed to sense the quantity of consumable within  
4 the consumable-containing cartridge; and

5 an electronic latch connected to the sensor and to the ejection mechanism, the  
6 electronic latch being adapted and constructed to automatically actuate the ejection  
7 mechanism to eject the consumable-containing cartridge when the sensor indicates that the  
8 quantity of consumable within the consumable-containing cartridge is at a predetermined  
9 level.

1 6. (Previously Presented) A printing consumable loading assembly according to  
2 claim 1 further comprising a plurality of consumable-containing cartridges insertable into the  
3 cartridge holding assembly of the guide assembly, the guide assembly adapted to receive the  
4 plurality of consumable-containing cartridges when inserted through the cartridge opening of  
5 the imaging system housing, the guide assembly adapted to guide the plurality of  
6 consumable-containing cartridges into an in-use position within the cartridge holding  
7 assembly.

1 7. Cancelled.

1 8. (Previously Presented) A printing consumable loading assembly according to  
2 claim 1, wherein the cartridge holding assembly further comprises a registration key  
3 mechanism on the openings in the system housing and the consumable-containing cartridges,  
4 the respective consumable-containing cartridges being configured to fit only into  
5 corresponding openings in the system housing.

1 9. (Original) A printing consumable loading assembly according to claim 8,  
2 wherein the registration key mechanism comprises the following:

3 a respective fin on each of the consumable-containing cartridges, the shape  
4 and position of the fin indicating a particular aspect of the consumable within the cartridge;  
5 and

6 a respective slot in each of the openings, the slots corresponding in shape and  
7 position to the fins on the respective consumable-containing cartridges.

1 10. Cancelled.

1           11.     (Original) A printing consumable loading assembly according to claim 1,  
2 wherein the cartridge holding assembly includes a carousel adapted and constructed to hold a  
3 plurality of consumable-containing cartridges, and the guide assembly is mounted within the  
4 system housing in a position aligned for loading cartridges into the carousel, the carousel  
5 being configured to rotate to a first position to receive cartridges loaded via the opening and  
6 the guide assembly, and a second position for image forming.

1           12.     (Previously Presented) A printing consumable loading assembly according to  
2 claim 1, further comprising a hinged door over the cartridge opening in the system housing.

1           13.     (Previously Presented) An imaging system comprising:  
2                   an imaging system housing;  
3                   the imaging system housing including at least one cartridge opening;  
4                   a printing consumable loading assembly including, a cartridge holding  
5 assembly, the cartridge holding assembly including a guide assembly, the guide assembly  
6 including a series of spring-loaded levers and cooperating motor-driven cams to guide at least  
7 one consumable-containing cartridge into an in-use position, the cartridge holding assembly  
8 connected to the imaging system within the housing; and  
9                   the at least one consumable-containing cartridge insertable into the cartridge  
10 holding assembly of the guide assembly, the guide assembly adapted to receive the at least  
11 one consumable-containing cartridge as it is inserted through the at least one cartridge  
12 opening of the imaging system housing, the guide assembly adapted to transport the  
13 consumables cartridge into an in-use position within the cartridge holding assembly.

1           14.     (Previously Presented) An imaging system according to claim 13, further  
2 comprising a control actuator connected to the imaging system and to the guide assembly, the  
3 control actuator including an ejection mechanism connected to the imaging system and to the  
4 guide assembly, the ejection mechanism being adapted and constructed to selectively eject a  
5 consumable-containing cartridge from the holding assembly.

1           15.     (Previously Presented) An imaging system according to claim 14, further  
2 comprising the following:  
3                   a sensor adapted and constructed to sense the quantity of consumable within  
4 the consumable-containing cartridge; and



5 a display located on the system housing, the display being connected to the  
6 sensor to display sensor readings.

1 16. (Previously Presented) An imaging system according to claim 13, wherein the  
2 at least one consumable-containing cartridge comprises a plurality of consumable-containing  
3 cartridges.

1 17. (Previously Presented) An imaging system according to claim 16, wherein the  
2 at least one opening in the system housing comprises a plurality of openings in the system  
3 housing.

1 18. (Previously Presented) An imaging system according to claim 17, further  
2 comprising a registration key mechanism on the openings in the system housing and the  
3 consumable-containing cartridges, the respective consumable-containing cartridges being  
4 configured to fit only into corresponding openings in the system housing.

1 19. (Previously Presented) An imaging system according to claim 13, wherein the  
2 holding assembly includes a carousel adapted and constructed to hold a plurality of  
3 consumable-containing cartridges, and the guide assembly is mounted within the system  
4 housing in a position aligned for loading cartridges into the carousel, the carousel being  
5 adapted and constructed to rotate to a first position to receive cartridges loaded via the  
6 opening and the guide assembly, and a second position for image forming.

1 20. (Previously Presented) A method of loading a consumable-containing  
2 cartridge in an imaging system including an imaging system housing including a cartridge  
3 opening formed in the system housing and cartridge holding assembly including a guide  
4 assembly, the guide assembly including a series of cooperating spring-loaded levers and  
5 motor-driven cams for guiding the consumable-containing cartridge to a loaded position  
6 when the consumable-containing cartridge is inserted thereby moving the cartridge holding  
7 assembly, the guide assembly aligned with the cartridge opening of the imaging system  
8 housing, the method comprising the following steps:

9 inserting the consumable-containing cartridge into the cartridge holding  
10 assembly through the cartridge opening formed in the system housing; and

11 receiving the consumable-containing cartridge in the cartridge holding  
12 assembly as it is inserted through the cartridge opening of the imaging system housing; and

- 13                   guiding the consumable-containing cartridge into an in-use position with the  
14 cartridge holding assembly.